

## What is the Real Cost of Buying a House and Car? Lesson Plan

Target Audience: 12<sup>th</sup> grade government students

Length preferred: 1 day (90-minute class)

### Objectives

The students will:

1. Calculate their monthly income after taxes, real estate taxes, and personal property taxes.
2. Utilize resources, such as the internet, to find interest rates on mortgages and car loans.
3. Compare and contrast tax rates for urban and rural areas of Virginia.
4. Explain why local and state governments tax.

### 1. Overview

In this activity, students will be purchasing a house and a car. After making those purchases, the student will pay the taxes on the house and car based on the tax rate of their local government.

Participation in this activity will result in students gaining knowledge of what local taxes residents pay to their local government. Students will understand that where they live will effect what taxes they pay to their local government. Also, they will have a better understanding of how local governments spend tax money.

### 2. Activities

#### **Activity 1**

- Before beginning the activity, teachers will need to record on 5 x 7 index cards the different levels of income for middle class America. Each index card will increase in \$1000 increments. Information for the index cards is available on Handout #1: *Middle Class Income in the United States*. In addition, teachers need to collect new and existing home sales magazines, car sales magazines and/or classified ads from newspapers. You will need a classroom set.
- As students enter the classroom, have them select one of the prepared index cards indicating how much money they will earn in a year.
- After selecting an index card, have students complete Handout #2: *How Much Do I Have to Spend?* After completing this handout, students will know how much they have to spend on a house and a car.

#### **Activity 2**

- Students will be looking for a house and a car they can afford based on their monthly income. They can use newspapers, new and existing homes sales magazines, car sales magazines, and/or the Internet.
- After the students choose their house and car, they need to complete Handout #3: *Applying for a House and Car Loan*.

#### **Activity 3**

- After students have selected a house and completed the application, they need to complete Handout #4: *Taxes We Pay*.
- To help students complete Handout #4, distribute copies of Handout #5: *Tax Rates*. Teachers can make this handout specific to their surrounding counties and cities.
- If a student cannot afford the monthly payments for their house and car, they need to find another house or car they can afford based on their income.
- Students will now see how much of their income is paid in federal, state, and local taxes by completing Handout #6: *The Big Picture*.

### **3. Group Discussion**

1. Why do local governments tax?
2. What is the largest tax revenue for local governments in Virginia?
3. How much did your house payment increase as a result of the real estate tax?
4. Do you continue to pay real estate tax after your house is paid off?
5. What is a progressive tax?
6. What do local governments use their tax money for?
7. Why do towns have to pay a town tax and a county tax?
8. What facilities do towns usually share with counties and cities?
9. Why are tax rates different from local government to local government?
10. Who determines the tax rate for a local government?

### **4. Background Information**

A state government can levy taxes as it chooses. The state legislature decides what taxes the State will levy, and at what rates. It also decides what taxes a local government can levy.

The largest revenue tax for states is sales tax; 45 out of 50 states charge a general sales tax and all 50 states charge a selective sales tax on gasoline, alcoholic beverages, and cigarettes. The second largest revenue tax for state governments is income tax; 43 out of 50 states levy an individual income tax.

The largest revenue tax for local governments is property tax. There are two types of property tax: 1.) real estate tax, such as land, buildings, and improvements that go with the property and 2.) personal property tax on items such as cars, trucks, boats, etc.

The largest expenditure for state governments is education, which represents one-third of a state's budget. The second largest expenditure is public welfare. States take an active role in promoting the health and welfare of their residents.

Local governments also have expenditures. Primary and secondary education is largely the responsibility of local governments and consumes a large portion of the budget. The second largest expenditure for local governments is police and fire protection.

### **5. Conclusion**

This activity should give students a better understanding of the state and local taxes they pay. You cannot buy a house or car in a particular county or city and not be able to pay the taxes. Living outside the large city in a rural county may help someone have a bigger house or a more expensive car because the taxes will not be as high. Students should also have a better understanding that a large amount of their pay check is used to pay taxes.

## 6. Differentiation

For more advanced students, you can use the websites for purchasing a home and car and determine how much interest they pay on each of their loans. You could discuss why banks charge interest, who determines the interest rate, what makes the rate go up and down. Also, you could calculate how much more interest you pay on a house or car with a longer term as compared to a shorter term and a higher payment.

## 7. Sol Skills

The student will demonstrate mastery of the social studies skills citizenship requires, including the ability to

- analyze primary and secondary source documents (GOVT.1a).

## 8. SOL Content

The student will demonstrate knowledge of the role of government in the Virginia and United States economies by

- understanding the types and purposes of taxation (GOVT.16d).

## 9. Materials

- Handout #1: *Middle Class Income in the United States*
- Handout #2: *How Much Do I Have to Spend?*
- Handout #3: *Applying for a House and Car Loan*
- Handout #4: *Taxes We Pay*
- Handout #5: *Tax Rates*
- Handout #6: *The Big Picture*
- Access to the Internet

## Resources

- McClenaghan, William A. (ed.). *Magruder's American Government*—2007 edition
- Thomas, W. Laverne. (ed.). *Sociology the Study of Human Relationships*—2005 edition
- <http://mortgages.interest.com>
- [www.bankrate.com](http://www.bankrate.com)

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_**Middle Class Income in the United States**

**Directions:** Use the information provided to prepare index cards. Write each income on an individual index card and distribute one to each student.

\$32,000	\$43,000	\$54,000	\$65,000
\$33,000	\$44,000	\$55,000	\$66,000
\$34,000	\$45,000	\$56,000	\$67,000
\$35,000	\$46,000	\$57,000	\$68,000
\$36,000	\$47,000	\$58,000	\$69,000
\$37,000	\$48,000	\$59,000	\$70,000
\$38,000	\$49,000	\$60,000	\$71,000
\$39,000	\$50,000	\$61,000	\$72,000
\$40,000	\$51,000	\$62,000	\$73,000
\$41,000	\$52,000	\$63,000	\$74,000
\$42,000	\$53,000	\$64,000	\$75,000

**According to sociologists, middle class income ranges from \$32,000 to \$75,000**

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

## How Much Do I Have to Spend?

**Directions:** Using the income you were given on the index card, complete the handout to determine how much money you will have to spend on a house and car every month.

1. Income \_\_\_\_\_  
The figure on your index card
  
2. Federal Income Tax Withheld (25%) \_\_\_\_\_  
Income X .25 = federal tax withheld
  
3. State Income Tax Withheld (5.75%) \_\_\_\_\_  
Income X .057 = state tax withheld
  
4. Total taxes withheld \_\_\_\_\_  
Federal tax withheld + state tax withheld = total
  
5. Income after taxes \_\_\_\_\_  
Take income (question #1) subtract total taxes withheld (questions #4)  
Income – total taxes withheld = Income after taxes
  
6. Monthly Income \_\_\_\_\_  
Take income after taxes (question #5) and divide by 12

This is how much money a month you will have to spend for a house payment and car payment. Keep in mind this does not include any other bills you may have, i.e. water, electric, gas, cable, phone, credit card, etc. In other words you cannot spend all of your income on your house payment and car payment. However, these two payments should be your largest payments for the month.

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

## Applying for a House and Car Loan

### Step 1—Determine the Interest Rate and Monthly Payment for Your House

Go to—<http://mortgages.interest.com>

At the top of the page, click on Mortgages

Click on Mortgage Calculator

Click on Mortgage Loan Payment Calculator

Record the price of your home in the Mortgage Amount space

Enter 30 in the Mortgage Term space

Enter Interest Rate in space (the interest rate is found on the right side under **National Mortgage Rate**)

At the bottom of the page, click on Calculate

What will be your monthly house payment if financed for 30 years? \_\_\_\_\_

### Step 2—Determine the Taxes You Will Pay for Your House

Complete Handout #4: *Taxes We Pay*. After completing the handout, answer the following questions.

How much is the real estate tax on your house? \_\_\_\_\_ Question #2

Divide the real estate tax by 12 monthly payments. \_\_\_\_\_ This is how much **more** your house payment will be per month to cover your real estate tax.

What is your monthly house payment? \_\_\_\_\_

Monthly House Payment (Question #1) + monthly real estate tax (Question #3)=  
house payment per month.

Did you stay within your budget, based on your How Much Do I Have to Spend? Are you going to be able to pay other bills? Are you going to be able to eat, watch TV, buy furniture, pay your electric bill, credit card bills, etc.

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

**Step 3—Determine the Total Cost of Purchasing a Car**

Go to—[www.bankrate.com](http://www.bankrate.com)

Click on Auto on the top of the page

Record the interest rate for 36 and 48 months (choose if you want a new or used car)

Interest Rate for 36 months \_\_\_\_\_

Interest Rate for 48 months \_\_\_\_\_

**Cost for a 36 Month Loan**

Click on Auto Loan Calculator

Record the price of your car \_\_\_\_\_

Enter the price of your car, enter the number of months as 36 months or 3 years, and enter the interest rate for 36 months.

**Click Calculate**

Payment per month for 36 month loan \_\_\_\_\_

**Click on Show/Recalculate Amortization Table**

Slide to the end of the table, last payment, and record Total Interest

\_\_\_\_\_

What is the total amount financed to purchase this car? \_\_\_\_\_  
(price of car + total interest paid)

**Cost for a 48 Month Loan**

Go back to the **Auto Loan Calculators**

Enter the number of months as 48 months or 4 years and enter the interest rate for 48 months

**Click Calculate**

Payment per month for 48 month loan \_\_\_\_\_

**Click on Show/Recalculate Amortization Table**

Slide to the end of the table, last payment, and record Total Interest

\_\_\_\_\_

What is the total amount financed to purchase this car? \_\_\_\_\_  
(price of car + total interest paid)

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

***Cost for a 60 Month Loan***

Go back to the **Auto Loan Calculators**

Enter the number of months as 60 months or 5 years and keep the interest rate the same as 48 months.

**Click Calculate**

Payment per month for 60 month loan \_\_\_\_\_

**Click on Show/Recalculate Amortization Table**

Slide to the end of the table, last payment, and record Total Interest  
\_\_\_\_\_

What is the total amount financed to purchase this car? \_\_\_\_\_  
(price of car + total interest paid)

***Cost for a 72 Month Loan***

Go back to the **Auto Loan Calculators**

Enter the number of months as 72 months or 6 years and keep the interest rate the same as 48 months.

**Click Calculate**

Payment per month for 72 month loan \_\_\_\_\_

**Click on Show/Recalculate Amortization Table**

Slide to the end of the table, last payment, and record Total Interest  
\_\_\_\_\_

What is the total amount financed to purchase this car? \_\_\_\_\_  
(price of car + total interest paid)

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Decide which payment fits in your budget the best.

What type of loan did you decide on, 36, 48, 60, or 72?

The moral of the story.....the longer you finance the more you actually pay for the car. A larger payment for a shorter amount of time is cheaper in the long run but it is not always what we can afford.

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

## Taxes We Pay

Now you need to find a house. You can use real estate magazines, websites, or newspapers to find a house that fits into your budget, based on Handout #2: *How Much Money Do I Have To Spend?*

After you find your house, answer the following questions.

1. Where is your house located? (Circle One)

Botetourt County  
Buchanan  
Franklin County  
Boones Mill  
Rocky Mount

Roanoke County  
Roanoke City  
Salem  
Other \_\_\_\_\_

2. Cost of your house? \_\_\_\_\_

3. Real Estate Tax: \_\_\_\_\_

- Cost (value) of your house divided by 100
- Take that number and multiply by the tax rate (see Handout #5, "Tax Rates")
- $\frac{\text{Cost of your house}}{100} \times \text{tax rate} = \text{real estate tax}$

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Now you need to find a car. You can use car magazines, websites, or newspapers to find a car that fits into your budget, based on Handout #2: *How Much Money Do I Have To Spend?*

After you find your car, answer the following questions.

4. Cost of your Car? \_\_\_\_\_

5. Personal Property Tax: \_\_\_\_\_

- Cost(value) of your car divided by 100
- Take that number and multiply by the tax rate (see Handout #5: "Tax Rates")
- $\frac{\text{Cost of your house}}{100} \times \text{tax rate} = \text{personal property tax}$

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

### Tax Rates

County	Real Estate Tax	Personal Property Tax
Botetourt County	.65 on \$100	2.55 on \$100
Buchanan	.20 on \$100	.23 on \$100
Franklin County	.46 on \$100	1.89 on \$100
Boones Mill	.10 on \$100	.40 on \$100
Rocky Mount	.13 on \$100	.51 on \$100
Roanoke County	1.09 on \$100	3.50 on \$100
Roanoke City	1.19 on \$100	3.45 on \$100
Salem	1.18 on \$100	3.20 on \$100

**If your house is located in another area not listed above, get on the internet and find the tax rate for real estate and personal property for that county, city, or town.**

**If your house is located in a town, it is also part of a county. You need to know in which county the town is located.**

Name \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

## The Big Picture

*How much of your income have you paid in federal, state and local taxes?*

To answer the question, refer to the following handouts: *How Much Do I Have to Spend?* and *Taxes We Pay*.

Answer the following questions:

1. Income \_\_\_\_\_
  
2. Federal Income Tax: \_\_\_\_\_ paid every pay check
  
3. State Income Tax: \_\_\_\_\_ paid every pay check
  
4. Real Estate Tax: \_\_\_\_\_ paid every month as part of house payment.
  
5. Personal Property Tax: \_\_\_\_\_ paid once a year, usually in the spring

Total Taxes Paid this year: \_\_\_\_\_

Other taxes we pay but do not really keep track of such as sales tax, meals tax, state inspection, drivers' license, toll roads, lodging tax, to name a few.

**Ben Franklin said, "A man only has to do two things; die and pay taxes."**